

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.

APPENDIX A
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Please amend the specification on page 7, lines 18-26 as follows.

Figure 1 shows the proposed topology of GPCR-B3, with a large extracellular domain extending from amino acid 1 to about amino acid 580 of the rat GPCR-B3 amino acid sequence (corresponding to nucleotide residues 1-1740 of the rat sequence, with the ATG initiator methionine defined as residue 1), and seven transmembrane domains. The large extracellular domain may extend into the first transmembrane domain. Dark residues indicate identities between GPCR-B3 and GPCR-B4 (for a description of GPCR-B4, *see, e.g.*, [USSN 60/095,464, filed July 28, 1998, and USSN 60/112,747, filed December 17, 1998] US Patent No. 6,383,778; *see also* Hoon *et al.*, *Cell* 96:541-551 (1999)).

IN THE CLAIMS

1. (twice amended) An isolated nucleic acid encoding a [sensory] taste transduction G-protein coupled receptor, [the receptor comprising greater than about 70% amino acid identity to an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the nucleic acid encodes a receptor that specifically binds to polyclonal antibodies generated against SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3] wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

10. (twice amended) An isolated nucleic acid encoding a [sensory] taste transduction G-protein coupled receptor, [the receptor comprising greater than about 70% amino acid identity to a polypeptide having a sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3,] wherein the nucleic acid selectively hybridizes under moderately stringent hybridization conditions[, which end with a wash step at 45°C in a solution comprising 1x SSC, to a nucleotide sequence of SEQ ID NO:4, SEQ ID NO:5, or SEQ ID NO:6] to a nucleotide sequence of SEQ ID NO:4, SEQ ID NO:5 or SEQ ID NO:6, wherein the hybridization reaction is incubated at 37°C in a solution comprising 40% formamide, 1M NaCl and 1% SDS and washed at 45°C in a solution comprising 1x SSC, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

11. (twice amended) An isolated nucleic acid encoding an extracellular domain of a [sensory] taste transduction G-protein coupled receptor, [the extracellular domain having greater than about 70% amino acid sequence identity to amino acids 1-563 of SEQ ID NO:1, wherein the extracellular domain specifically binds to polyclonal antibodies generated against amino acids 1-563 of SEQ ID NO:1] wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding amino acids 1-563 of SEQ ID NO:1, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes the extracellular domain linked to a nucleic acid encoding a heterologous receptor polypeptide, forming a chimeric receptor polypeptide that has G protein coupled receptor activity.

17. (twice amended) [The] An isolated nucleic acid [of claim 14, wherein the nucleic acid further encodes] encoding a cytoplasmic domain of a taste transduction G protein coupled receptor, [comprising greater than about 70% amino acid identity to amino acids 812 to 840 of SEQ ID NO:1], wherein the nucleic acid specifically hybridizes under highly stringent

conditions to a nucleic acid encoding amino acids 812-840 of SEQ ID NO:1, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS and wherein the nucleic acid encodes the cytoplasmic domain linked to a nucleic acid encoding a heterologous receptor polypeptide, forming a chimeric receptor polypeptide that has G protein coupled receptor activity.

61. (twice amended) A method of making a [sensory] taste transduction G-protein coupled receptor, the method comprising the step of expressing the receptor from a recombinant expression vector comprising a nucleic acid encoding the receptor, [wherein the amino acid sequence of the receptor comprises greater than about 70% amino acid identity to a polypeptide having a sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the receptor specifically binds to polyclonal antibodies generated against SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3] wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

62. (twice amended) A method of making a recombinant cell comprising a [sensory] taste transduction G-protein coupled receptor, the method comprising the step of transducing the cell with an expression vector comprising a nucleic acid encoding the receptor, [wherein the amino acid sequence of the receptor comprises greater than about 70% amino acid identity to a polypeptide having a sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the receptor specifically binds to polyclonal antibodies generated against SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3] wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ

ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

63. (twice amended) A method of making an recombinant expression vector comprising a nucleic acid encoding a [sensory] taste transduction G-protein coupled receptor, the method comprising the step of ligating to an expression vector a nucleic acid encoding the receptor, [wherein the amino acid sequence of the receptor comprises greater than about 70% amino acid identity to a polypeptide having a sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the receptor specifically binds to polyclonal antibodies generated against SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3] wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

APPENDIX B
PENDING CLAIMS

1. (twice amended) An isolated nucleic acid encoding a taste transduction G-protein coupled receptor, wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

4. (as filed) The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a receptor comprising an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.

5. (as filed) The isolated nucleic acid sequence of claim 1, wherein the nucleic acid comprises a nucleotide sequence of SEQ ID NO:4, SEQ ID NO:5, or SEQ ID NO:6.

6. (as filed) The isolated nucleic acid of claim 1, wherein the nucleic acid is from a human, a mouse, or a rat.

8. (as filed) The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a receptor having a molecular weight of about between 92 kDa to about 102 kDa.

10. (twice amended) An isolated nucleic acid encoding a taste transduction G-protein coupled receptor, wherein the nucleic acid selectively hybridizes under moderately stringent hybridization conditions to a nucleotide sequence of SEQ ID NO:4, SEQ ID NO:5 or

SEQ ID NO:6, wherein the hybridization reaction is incubated at 37°C in a solution comprising 40% formamide, 1M NaCl and 1% SDS and washed at 45°C in a solution comprising 1x SSC, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

11. (twice amended) An isolated nucleic acid encoding an extracellular domain of a taste transduction G-protein coupled receptor, wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding amino acids 1-563 of SEQ ID NO:1, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes the extracellular domain linked to a nucleic acid encoding a heterologous receptor polypeptide, forming a chimeric receptor polypeptide that has G protein coupled receptor activity.

13. (previously once amended) The isolated nucleic acid of claim 11, wherein the nucleic acid encodes amino acids 1-563 of SEQ ID NO:1.

17. (twice amended) An isolated nucleic acid encoding a cytoplasmic domain of a taste transduction G protein coupled receptor, wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding amino acids 812-840 of SEQ ID NO:1, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS and wherein the nucleic acid encodes the cytoplasmic domain linked to a nucleic acid encoding a heterologous receptor polypeptide, forming a chimeric receptor polypeptide that has G protein coupled receptor activity.

18. (previously once amended) The isolated nucleic acid of claim 17, wherein the nucleic acid encodes amino acids 812 to 840 of SEQ ID NO:1.

34. (as filed) An expression vector comprising the nucleic acid of claim 1.

35. (as filed) A host cell transfected with the vector of claim 34.

61. (twice amended) A method of making a taste transduction G-protein coupled receptor, the method comprising the step of expressing the receptor from a recombinant expression vector comprising a nucleic acid encoding the receptor, wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

62. (twice amended) A method of making a recombinant cell comprising a taste transduction G-protein coupled receptor, the method comprising the step of transducing the cell with an expression vector comprising a nucleic acid encoding the receptor, wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.

63. (twice amended) A method of making an recombinant expression vector comprising a nucleic acid encoding a taste transduction G-protein coupled receptor, the method comprising the step of ligating to an expression vector a nucleic acid encoding the receptor, wherein the nucleic acid specifically hybridizes under highly stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50%

formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS, and wherein the nucleic acid encodes a receptor that has G-coupled protein receptor activity.